



Conserve O Gram

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Choosing A Vacuum Cleaner For Use In Museum Collections

An essential piece of equipment in any museum is a vacuum cleaner. There are a number of options to be considered when choosing the type of vacuum cleaner to purchase. Careful consideration of how your vacuum will be used and the options you will have when purchasing a vacuum will help to make an informed choice.

Vacuum cleaners have many uses in museum collections. These include:

- general building housekeeping
- dusting of collections
- removal of pest waste after an infestation
- mold outbreak
- flood cleanup

There are a variety of options to investigate when choosing a vacuum cleaner.

Filtration system. Filtration systems for vacuums used in museums must be very effective to keep most of the dust and dirt (particulates) from blowing through the exhaust and back out into the air. HEPA filtration is a more effective kind of filtration for dry vacuums than regular vacuum bags. HEPA stands for High Efficiency Particulate Air and a HEPA filter must remove at least 99.97% of particulates 0.3 microns or larger in size. Any vacuum that you purchase should remove particles to at least 0.3 microns. ULPA (Ultra Low Penetration Air) filters remove particulates down to 0.12 microns and may be appropriate for specialized projects.

Dry vacuums will often have stages of bags and filters that remove more dirt and dust as the air moves through the vacuum cleaner. The large pieces are caught in a bag. There are high

filtration bags available. The air continues to blow through the bag carrying small particles that are then caught in additional filters. The HEPA (or ULPA) filter will catch the smallest particles.

Dental vacuums often use a water filter. The dirt is drawn down into a basin of water where it is caught and held. These types of vacuums may be useful for specific uses because the power of the suction can be easily controlled and the nozzle size can be very small. Regular water filtration floor vacuums are not as effective as regular vacuum cleaners with HEPA filters and should not be used.

Size/Manageability. Are you vacuuming a whole house, or only objects on a table? Do you want to be able to pick up the vacuum cleaner to get into tight spaces or do you want to be able to easily roll it around? Consider the following options and how they will affect using the vacuum:

- casters. Does it have castors and do they work well so that the vacuum is easily moved around a space?
- weight. Do you want to be able to lift the vacuum? If so it should be lightweight. Do you want it to remain on the floor? If so, it should have enough weight to remain stable even when the hose is tugged.
- carrying straps. Does it have a carrying strap to make it easy to carry around while working? There are also backpack models available.
- connections on the hose. Ball joint connections make it move more smoothly and easily.
- plug in or battery powered. Battery powered machines may give you more flexibility of

movement, but batteries may add to cost. Rechargeable batteries give you the advantages of both.

Suction strength and variability. You should be able to vary the suction strength either through an attached rheostat or a variable speed motor control. Many vacuums have a simple hole in the hose or wand that gives higher suction when covered.

Hoses and attachments. There are a wide variety of hoses and attachments (wands, brushes, heads). You should be sure that hoses are long and flexible enough to use easily in the spaces that will be cleaned. There are anti-static wands and hoses available. Consider products that have nozzles that go down to a very small size. These features can be very useful when cleaning museum artifacts. You can also buy additional nozzle attachments so extras are available when you need them.

Adaptability. Consider a vacuum's adaptability. Can you use it to vacuum floors and artifacts? Can you use it after a flood as well as for regular dry cleaning? Can you buy different kinds of bags and filters (with various costs) that suit the needs of your particular cleaning problem?

Cost. This is always part of the decision. There are a large number of vacuum cleaners available. Decide which options are important for your uses first and you will be able to make informed choices. Then cost considerations can be used to decide between several options.

Purchasing a Vacuum Cleaner

There are a variety of places you can purchase vacuums. Go to a local vacuum cleaner specialty store and explain what you are looking for. They can give you a wide range of information on a

variety of vacuum cleaners. HEPA filter vacuums are often sold as allergy control vacuums. Be aware that some vacuums sold as "museum" vacuums may not have HEPA filtration and other attributes that you may want.

Some information about using vacuum cleaners to clean objects is supplied in *Museum Handbook*, Part I, Appendix K, Care of Textile Objects. There is also information in other *Conserve O Gram* leaflets including: 3/5 Volcanic Ash: Cleaning Museum Objects, 7/5 Dusting Wooden Objects, 8/1 Removing Dust from Ceramic and Glass Objects, and 8/2 Storing and Handling Plaster Objects.

Sources

Nilfisk of America, Inc.
300 Technology Drive
Malvern, PA 19355
(610) 647-6420

Aseptico Aseptivac
(800) 426-5913

Miracle Marketing
Li'l Hummer Fanny-Vac
P.O. Box 520125
(800) 634-6102

Vacuum Attachment Kit
Clotilde
(800) 772-2891.

Parks can also obtain vacuum cleaners through *NPS Tools of the Trade* sources.

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